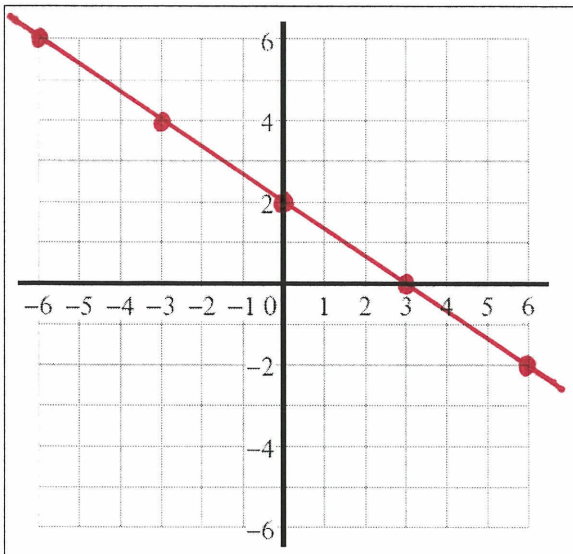
Principles of Algebra Name/Date Clee / Today

WS 8C.1 – Equations, Graphs, and Tables

Given either an equation, a graph, or a table for each line, complete the remaining two.

1.



x	y
-6	6
-3	4
0	2
3	0
6	-2

Equation in **slope-intercept** form:

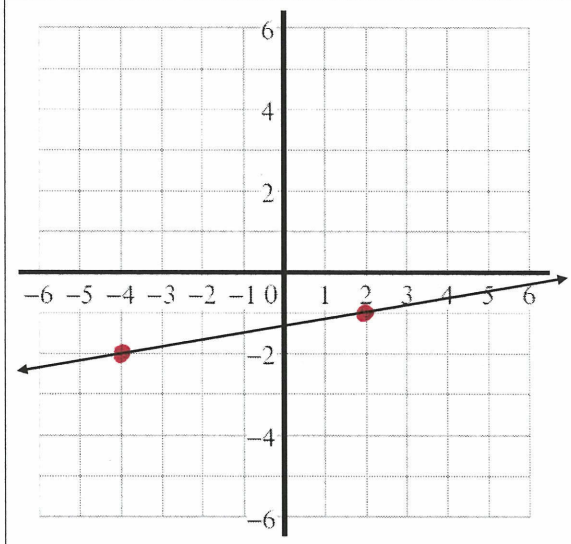
$y = mx + b$

$$y = -\frac{2}{3}x + 2$$

$m = -\frac{2}{3}$

$b = 2$

2.



x	y
-4	-2
2 (+6)	-1 (+1)
8 (+6)	0 (+1)
14 (+6)	1 (+1)
20	2

Equation in **point-slope** form:

$y - y_1 = m(x - x_1)$

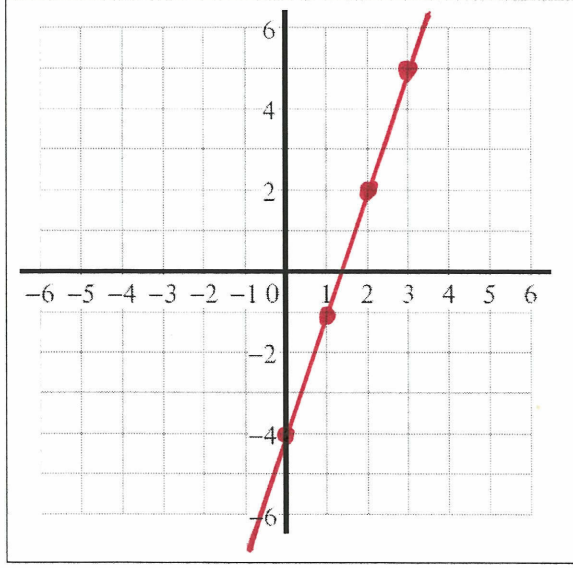
$m = \frac{1}{6}$ points: $(-4, -2)$ $(2, -1)$

$$y + 2 = \frac{1}{6}(x + 4)$$

OR

$$y + 1 = \frac{1}{6}(x - 2)$$

3.



x	y
2	2
0	-4
1	-1
3	5
-1	-7

Equation in **standard** form:

$Ax + By = C$

$m = 3$ $b = -4$

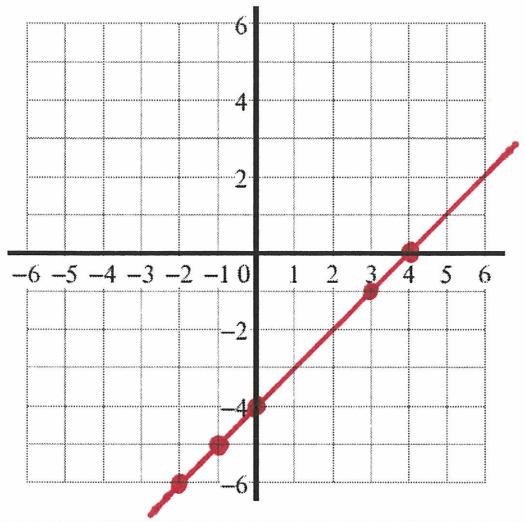
slope-intercept: $y = 3x - 4$

standard: $y = 3x - 4$

$-3x + y = -4$

$$3x - y = 4$$

4.



x	y
3	-1
0	-4
-2	-6
4	0
-1	-5

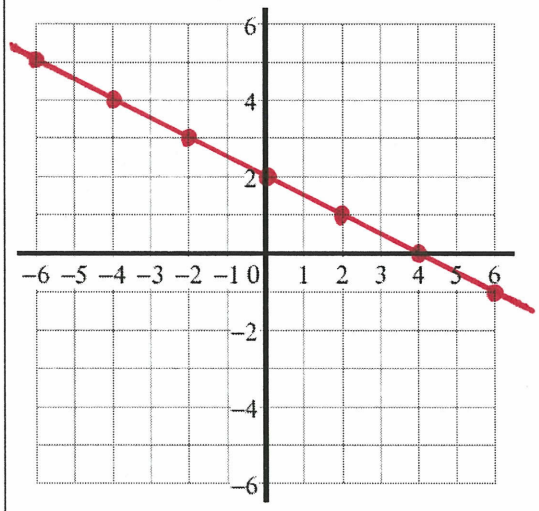
Equation in **slope-intercept** form:

$y = mx + b$

$m = 1 \quad b = -4$

$\boxed{y = x - 4}$

5.



x	y
-6	5
-4	4
-2	3
0	2
2	1

Equation in **point-slope** form:

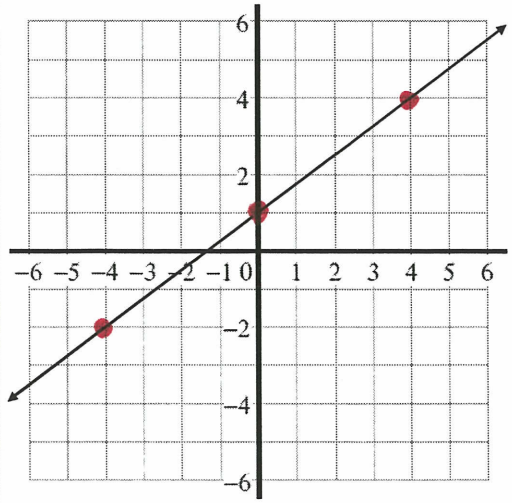
$y - y_1 = m(x - x_1)$

$$y - 1 = -\frac{1}{2}(x - 2)$$

$m = -\frac{1}{2}$

point: $(2, 1)$

6.



x	y
-4	-2
0	1
4 $+4$	4 $+3$
8 $+4$	7 $+3$
12	10

Equation in **standard** form:

$m = \frac{3}{4} \quad b = 1$ $\quad Ax + By = C$

slope-intercept: $y = \frac{3}{4}x + 1$

standard: $y = \frac{3}{4}x + 1$ $\quad \cdot 4 \quad \cdot 4 \quad \cdot 4$

$4y = 3x + 4$

$-3x + 4y = 4$

$\boxed{3x - 4y = -4}$